

REMARKS:Election

Applicants hereby elect claims 1-8 without traverse.

In the Title

A new title has been created, and which is believed to be descriptive of the invention as claimed.

In the Specification

The specification has been amended to correct the informalities noted in the Office Action. Withdrawal of the objection is respectfully requested.

Claims 1-4

Claims 1-4 have been rejected under 35 USC 102(b) as being anticipated by Applicants' admitted prior art (AAPA) FIGS. 2-3 and associated discussion.

Claim 1 has been amended to require that the third magnetic layer have a thickness at its air bearing surface that is less than its thickness at all points along the length of the coil-registry location. Support for this amendment is found on p. 8, lines 3-7 of the present application.

FIGS. 2-3 of the present application and related discussion fail to show this feature.

Claims 2-4 depend from claim 1, particularly as amended, and therefore incorporate the limitations of claim 1. Accordingly, claims 2-4 are also believed to be allowable. Allowance of claims 1-4 is respectfully requested.

Claims 5, 7-8

Claims 5 and 7-8 have been rejected under 35 USC 102(b) as being anticipated by Chen et al. (US 5652687).

SJO920000097US1/HIT1P159

Claim 5 has been amended to require that the third magnetic layer have a thickness at its air bearing surface that is less than its thickness at all points along the length of the coil-registry location.

The rejection relies on FIG. 22 of Chen, which shows an enlargement of the P2 layer as it passes over layer 204 at interface 206. However, claim 5 now requires that the thickness of the third pole be less than a thickness of the third magnetic layer along all points of the coil-registry location, as shown in FIG. 4. Chen, in contrast, has the same thickness at the pole as on the ABS side of the bump (just to the right of the plane formed along interface 206) in the coil registry region. Applicants also note that in real-life processing, it is unlikely that Chen's P2 pole tip would be thinner than the same layer in the back region, as materials tend to be deposited uniformly. Accordingly, Chen fails to teach or suggest the newly-added limitation of claim 5.

Applicants further submit that the claimed structure is superior to that of Chen, in that the bump in Chen's upper pole layer makes fabrication of additional layers above the head more difficult due to the more extreme topography. In fact, one of the benefits of the present invention is reduced incidence of cracking of the overlying alumina insulation.

Claims 5-8

Claims 5-8 have been rejected under 35 USC 103(a) as being unpatentable over Applicants' admitted prior art (AAPA) FIGS. 2-3 and associated discussion in view of Matono et al. (US 2002/0030930).

Applicants respectfully disagree that the combination proposed by the Examiner would render the claims obvious.

The analysis of obviousness was set forth in *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966). In order to establish a *prima facie* case of obviousness, three basic criteria must be met:

First, there must be some *suggestion or motivation*, either in the references themselves or in the knowledge generally available to one of ordinary skill

SJO920000097US1/HIT1P159

ordinary skill in the art, to modify the reference or to combine the teachings of the references. Second, there must be a reasonable *expectation of success*. Finally, the prior art reference or combined references must teach or suggest *all* the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success *must both be found in the prior art*, and not based on applicant's disclosure (*In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991; emphasis added).

Applicant respectfully disagrees that AAPA and Matono would suggest or motivate one skilled in the art to combine the teachings of AAPA and Matono to create Applicants' head, particularly as claimed. Applicants first note that the invention is an improvement for heads of the type shown in AAPA FIGS. 2-3. These heads have three pole tips, the third pole tip being wider than the immediately adjacent pole tip, thereby giving the pole tips a T-shape as viewed from the ABS. The T-shape allows the second pole tip to be made very narrow for writing very narrow tracks. The claimed structure, having a reduced thickness at the pole tip, reduces incidence of corner writing and cracking of the overlying aluminum oxide insulation.

In contrast, Matono only has two pole tips, and so is a completely different type of head, weighing against combination with AAPA FIGS. 2-3. Matono claims that his head is fully functional as is, and so there is no motivation to combine it with AAPA.

Further, Matono's layer (13) has a very narrow width (identical to the width of the gap layer (9)). Addition of Matono's layer would not result in the claimed T-shape. See for instance FIG. 6B, showing how the width is reduced even from deposition width. Accordingly, there is no motivation to add Matono's very narrow layer (13) to the structure shown in AAPA FIGS. 2-3, else the claimed T-shaped structure would not be found.

Further, if Matono's very narrow layer (13) were added to AAPA, none of the benefits of the T-shaped structure would be achieved. Thus, there is no reasonable expectation of success, at least with respect to the benefits provided by the claimed invention.

SJO920000097US1/HIT1P159

Nor is there any suggestion in Matono or AAPA that Matono's layer (13) would provide any benefits if positioned over an intermediate pole tip. Matono's layer (13) at the pole has the same width as the write gap (9). To add Matono's narrow layer over the writing pole tip (P2) of AAPA FIGS. 2-3 would result in a very tall and unstable structure, making the entire structure likely to break off during subsequent processing. As noted in the present application, the wider third pole (as claimed) supports the writing pole, thereby allowing stable fabrication of an ultra-narrow writing pole (P2).

Nor has the Examiner provided a reasonable motivation based on knowledge generally available to those skilled in the art and not provided by Applicants in the present disclosure, particularly with regard to claim 5.

"To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985).

Here, the Examiner has indicated that the motivation is that one of skill in the art would have added Matono's layer because Matono's reduced thickness prevents magnetic flux from being saturated in the middle of the magnetic path and prevents data from being written and erased in areas where data is not supposed to be written. Matono's pole (13), which is adjacent the gap (9), performs the writing without side writing. Applicants' second pole (also adjacent the gap) provides this benefit. So does the second pole in AAPA. Thus, it cannot be said that one skilled in the art would have been motivated to add Matono's narrow writing pole tip (adjacent the gap) to a structure already having a narrow writing pole tip (P2), as it is already present.

It is Applicants' *third* pole having a wider width than the second pole yet reduced thickness that provides benefits above and beyond what is suggested by Matono, AAPA, or the combination of both.

SJO920000097US1/HIT1P159

- 11 -

Because the combination of AAPA with Matono does not meet the *Graham* test, allowance of claims 5-8 is respectfully requested.

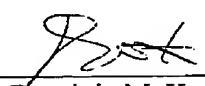
New Claims

New claims 14-16 have been added to vary the scope of the claims and further define the invention.

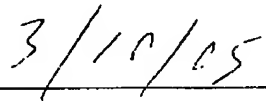
In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at (408) 971-2573. For payment of any additional fees due in connection with the filing of this paper, the Commissioner is authorized to charge such fees to Deposit Account No. 50-2587 (Order No. SJO920000097US1).

Respectfully submitted,

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SJO920000097US1/HIT1P159

- 12 -